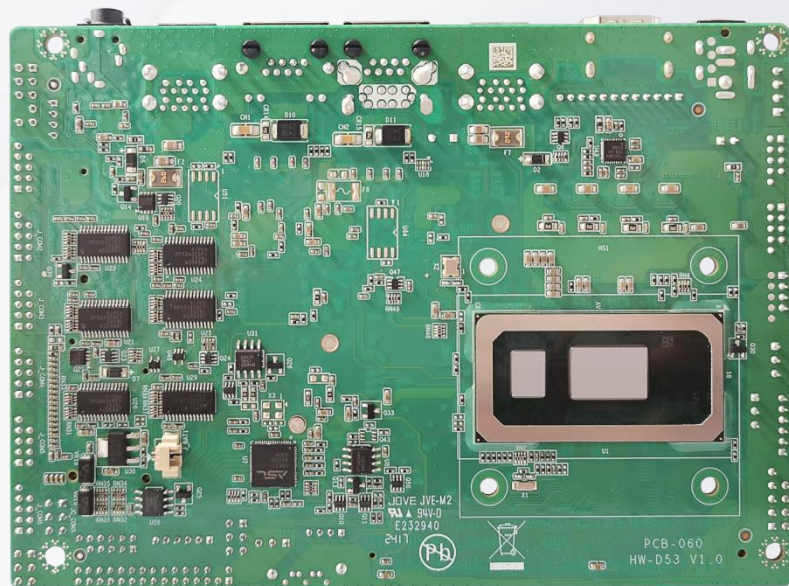
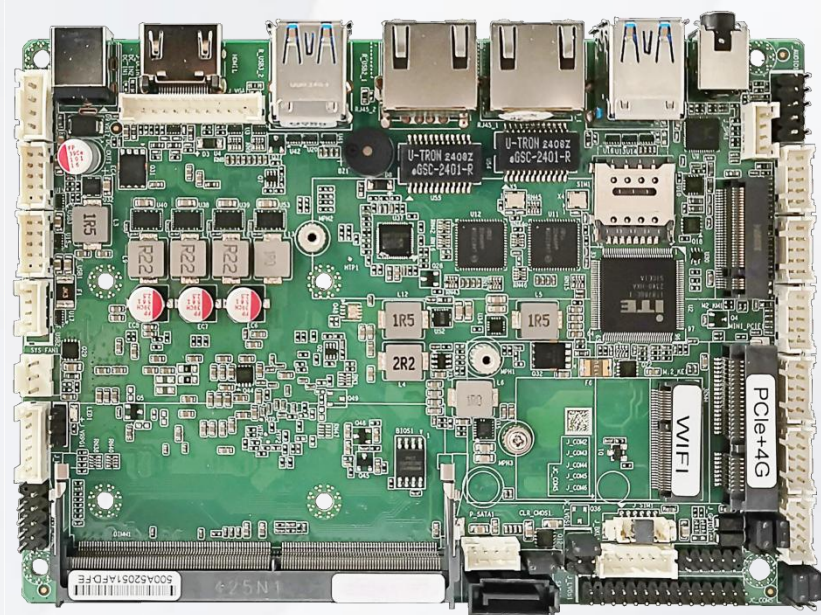


QY-MB-10310U-3.5 inch

- Intel Comet Lake 10th Core i3/i5/i7 CPU
- 2*Intel i210-AT LAN
- 5*USB 2.0, 4*USB 3.0
- 6*COM
- 1*VGA, 1*LVDS/eDP, 1*HDMI

(Support triple display simultaneously)

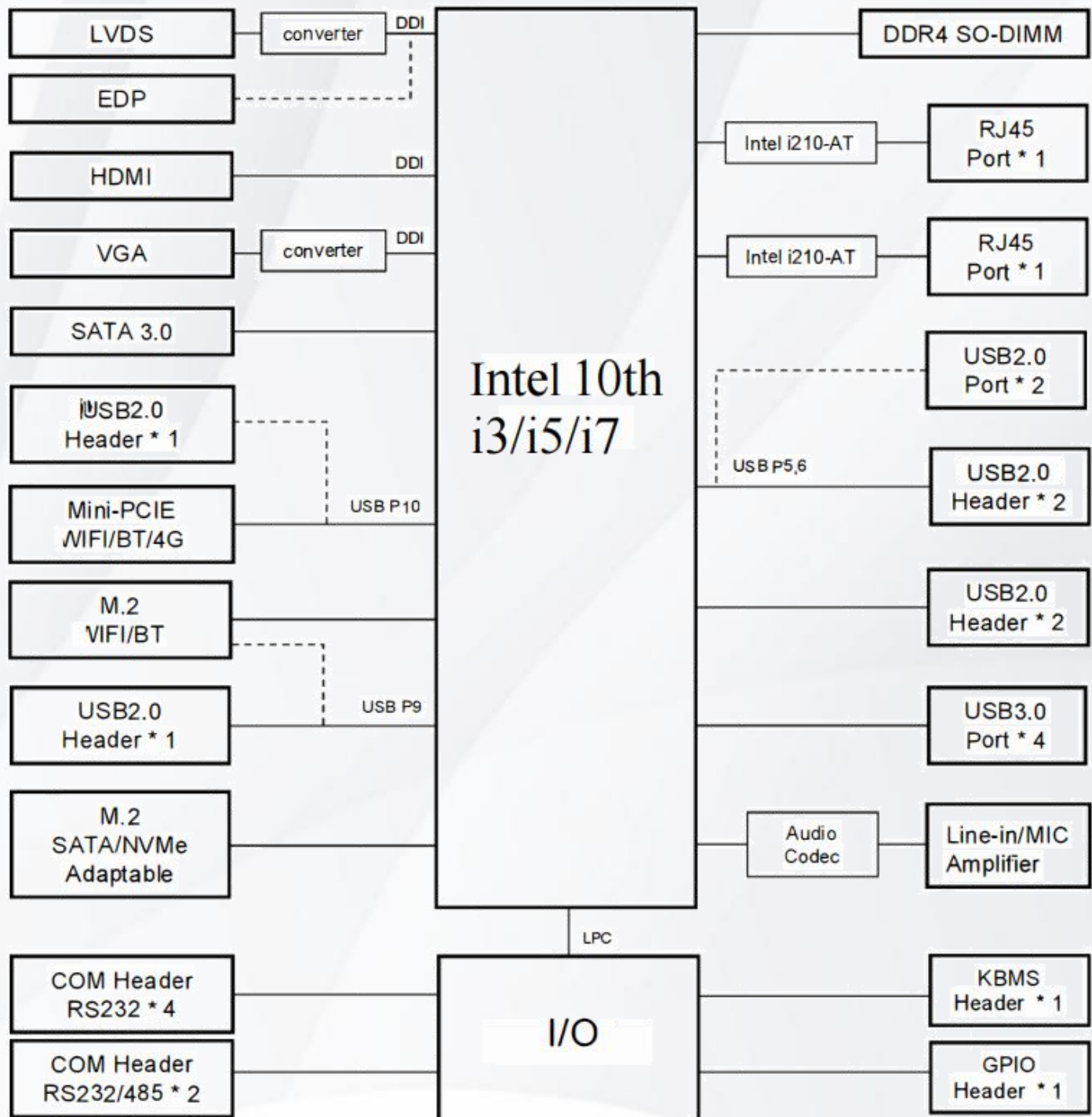
- 2*M.2(1*WIFI/BT, 1*SATA/NVMe Adaptable)
- 1*Mini-PCIe(WIFI/BT/4G)
- DC 12V power input
- 146*105mm



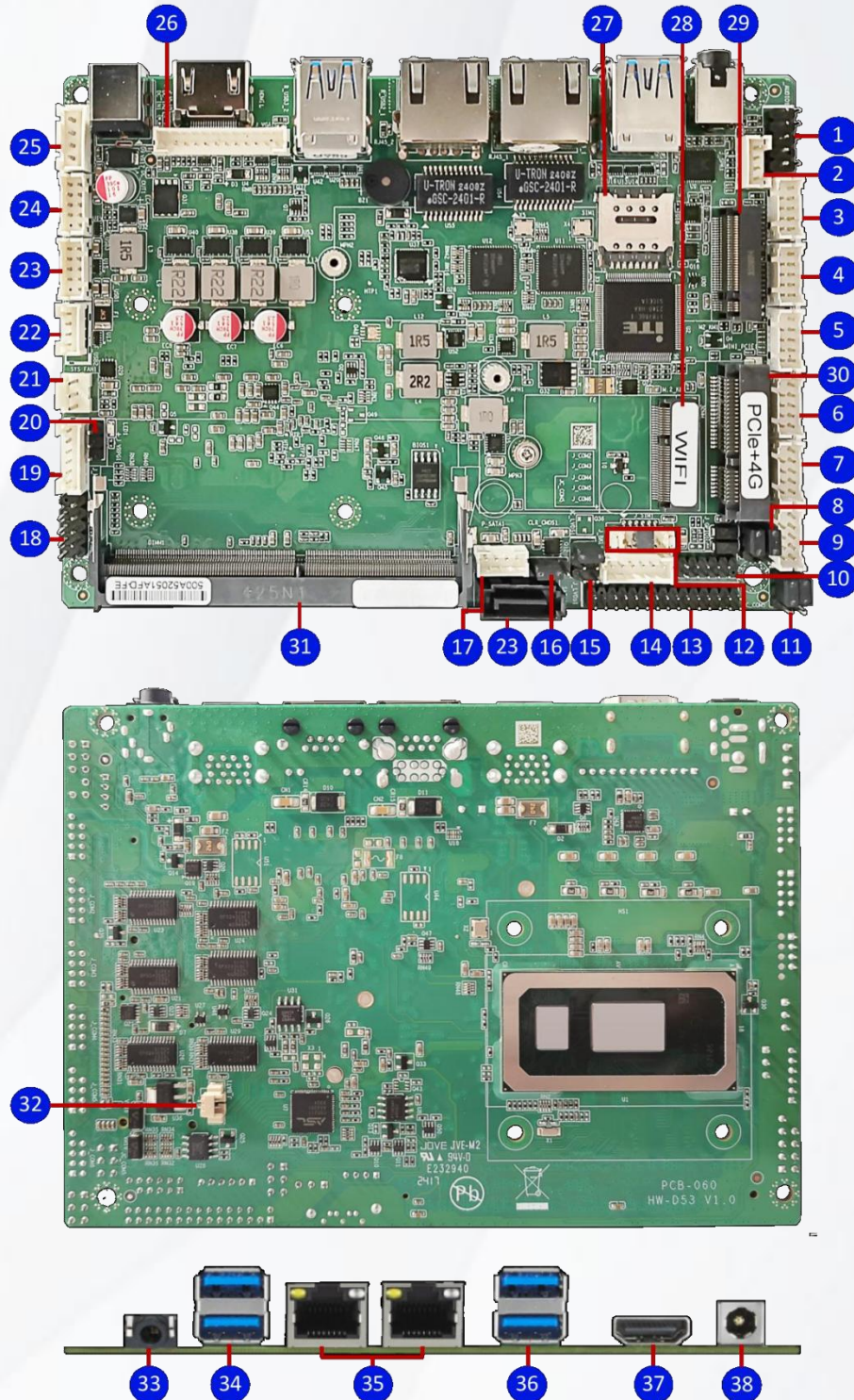
1. Specification:

Model	QY-MB-10310U-3.5 inch
CPU	Intel Core i5-10310U, up to 4.40G, TDP-up 25W, Quad-core
Display	Support triple display simultaneously: 1 * VGA: max resolution up to 1920 * 1200@60Hz 1 * HDMI: resolution up to 4096 * 2304@30Hz 1 * LVDS/eDP: LVDS, resolution up to 1920 * 1200@60Hz eDP, resolution up to 1920 * 1200@60Hz
Memory	DDR4-2666, 1 * SO-DIMM slot, up to 32GB
Storage	1 * SATA3.0 7P Connector 1 * M.2 (SATA/NVMe Adaptable)
Expansion	1 * M.2(WIFI/BT) 1 * Mini-PCle (WIFI/BT/4G)
Ethernet	2 * Intel 1Gbps PCIe Ethernet Controller(i210-AT) RJ45
USB	4 * USB3.0 (Rear I/O, TYPE-A) 5 * USB2.0 (Internal, Header)
COM	4 * RS232 (Header) 2* RS232/RS485(Header)
Audio	Realtek HDA Codec, with MIC / Line-out and Amplifier 1*Front Audio Header (Line-Out + MIC) 1 * Line-Out/MIC 2 in1 Phone Jack
Other Ports	1 * Micro SIM Card Slot 1 * SYS FAN Header 1 * Front Panel Header 1 * Keyboard&Mouse Header 1 * GPIO Header 1 * CMOS Clear Jumper 1 * SIM Card Header 1 * VGA Header
System	Windows 10/ 11, Linux
Temperature	Storage: -20℃ ~ 75℃ Operating: -15℃ ~ 60℃
Power Input	DC 12V

2. Date Flow



3. Marking Instruction



Connector&Header

1	Front Audio Pin Header
2	Amplifier Pin Header
3	COM1 Pin Header
4	COM2 Pin Header
5	COM3 Pin Header
6	COM4 Pin Header
7	COM5 Pin Header
8	COM5 RS232/RS485 Signal Select Jumper
9	COM6 Pin Header
10	GPIO Pin Header
11	COM6 RS232/RS485 Signal Select Jumper
12	SIM Card Pin Header
13	LVDS Signal Pin Header
14	LVDS Backlight Control Pin Header
15	LVDS VDD Select Jumper
16	CMOS Clear Jumper
17	SATA Power Pin Header
18	Front Panel Pin Header
19	Keyboard&Mouse Pin Header
20	VRM Power PROGRAM I/F Header
21	System Fan Header
22	Front USB2 Pin Header
23	Front USB1 Pin Header
24	Front USB3 Pin Header
25	DC12V/5V Power Output Header
26	VGA Pin Header
27	SIM Card Slot
28	M.2 Connector (Key-E,WIFI/BT)
29	M.2 Connector(SATA SSD/NVME Adaptable)
30	Mini-PCle Slot(WIFI/BT/4G)
31	DDR4 SO-DIMM Slot
32	Battery Header
33	Mic-in/Line-out Connector
34	USB 3.0 Connectors

35	LAN Connectors
36	USB 3.0 Connectors
37	HDMI Connector
38	DC 12V Power Input Connector

4. Definition

(1)Front Audio Pin Header (5*2 Pin 2.54mm)

No.	Location	Pin	Definition	Pin	Definition
1	F-AUDIO1	1	FP-MIC-L	2	GND
		3	FP-MIC-R	4	+ 3.3V
		5	FP-OUT-R	6	MIC-Detect
		7	GND		
		9	FP-OUT-L	10	LINE-Detect

(2)Amplifier Pin Header (4*1 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
2	J-SPK1	1	SPK-L-	2	SPK-L+
		3	SPK-R-	4	SPK-R+

(3)COM1 Pin Header (5*2 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
3	J-COM1	1	DCD	2	RXD
		3	TXD	4	DTR#
		5	GND	6	DSR#
		7	RTS#	8	CTS#
		9	RI#[1]		

Note:

[1]: Pin9 of J-COM1 also can be 5V(BIOS selectable) .

(4) COM2 Pin Header (5*2 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
4	J-COM2	1	DCD[1]	2	RXD
		3	TXD	4	DTR#
		5	GND	6	DSR#
		7	RTS#	8	CTS#
		9	RI#[2]		

Note:

[1] Pin1 of J-COM2 also can be 5V(resistor selectable).

[2] Pin9 of J-COM2 also can be 5V(BIOS selectable).

(5)COM3 Pin Headers (5*2 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
5	J-COM3	1	DCD[1]	2	RXD
		3	TXD	4	DTR#
		5	GND	6	DSR#
		7	RTS#	8	CTS#
		9	RI#[2]		

Note:

[1] Pin1 of J-COM3 also can be 5V(resistor selectable).

[2] Pin9 of J-COM3 also can be 5V(BIOS selectable).

(6)COM4 Pin Headers (5*2 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
6	J-COM4	1	DCD	2	RXD
		3	TXD	4	DTR#
		5	GND	6	DSR#
		7	RTS#	8	CTS#
		9	RI#[1]		

Note:

[1] Pin9 of J-COM4 also can be 12V(BIOS selectable).

(7)COM5 Pin Header (5*2 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
7	J-COM5	1	DCD#-/RS485-[1]	2	RXD#+/RS485+[1]
		3	TXD	4	DTR#
		5	GND	6	DSR#
		7	RTS#	8	CTS#
		9	RI#[1]		

Note:

[1] J-COM5 is support RS232 by default, it also can support RS485 selected by Jumper (JC-COM5, Location 8).

(8)COM5 RS232/RS485 Select Jumper (3*2 Pin 2.54mm)

No.	Location	Setting	Function
8	JC-COM5	1-3、 2-4(Default)	RS232
		3-5、 4-6	RS485

(9)COM6 Pin Header (5*2 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
9	J-COM6	1	DCD#-/RS485-[2]	2	RXD#+/RS485+[2]
		3	TXD	4	DTR#
		5	GND	6	DSR#
		7	RTS#	8	CTS#
		9	RI#[1]		

Note:

[1] J-COM6 is support RS232 by default, it also can support RS485 selected by Jumper (J-COM6, Location 11).

(10)GPIO Pin Header (6*2 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
10	J-GPIO1	1	SIO-GPI80 (0xA07 Bit0)	2	SIO-GPI81 (0xA07 Bit1)
		3	SIO- GPI82 (0xA07 Bit2)	4	SIO-GPI83 (0xA07 Bit3)
		5	GND	6	SIO-GPO84 (0xA07 Bit4)
		7	SIO-GPO85 (0xA07 Bit5)	8	SIO-GPO86 (0xA07 Bit6)
		9	SIO-GPO87 (0xA07 Bit7)	10	+ 3.3V
				12	N/C

(11)COM6 RS232/RS485 Select Jumper (3*2 Pin 2.54mm)

No.	Location	Settings	Function
11	JC-COM6	1-3、 2-4(Default)	RS232
		3-5、 4-6	RS485

(12)SIM Card Pin Header (6*1 Pin 1.25mm)

No.	Location	Pin	Definition	Pin	Definition
12	J-SIM1	1	DAT	2	CLK
		3	VPP	4	RST
		5	GND	6	PWR

Notes:

[1]: If J-SIM1 can be used, SIM Card Slot is not available.

(13)COM1/2/3/4 Pin Headers (20*2 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
13	J-LVDS1[2]	1	VDD [1]	2	VDD [1]
		3	VDD [1]		
		5	LVDS-Detect#/ EDP-HPD#	6	LVDS-Detect#/ EDP-HPD#
		7	LVDS-A-DATA0-	8	LVDS-A-DATA0+
		9	LVDS-A-DATA1-	10	LVDS-A-DATA1+
		11	LVDS-A-DATA2-	12	LVDS-A-DATA2+
		13	GND	14	GND

		15	LVDS-A-CLK-	16	LVDS-A-CLK+
		17	LVDS-A-DATA3-	18	LVDS-A-DATA3+
		19	LVDS-B-DATA0-/ EDP-TX0-	20	LVDS-B-DATA0+/ EDP-TX0+
		21	LVDS-B-DATA1-/ EDP-TX1-	22	LVDS-B-DATA1+/ EDP-TX1+
		23	LVDS-B-DATA2-	24	LVDS-B-DATA2+
		25	GND	26	GND
		27	LVDS-B-CLK-	28	LVDS-B-CLK+
		29	LVDS-B-DATA3-/ EDP-AUX-	30	LVDS-B-DATA3+/ EDP-AUX+

Notes:

[1]: Panel Power VDD is 3.3V by default, 5V or 12V is selectable by " LVDS VDD Select Jumper " (JC-LVDS1, Location 15).

[2]: It also can support eDP if specified(resistor selectable).

(14)LVDS Backlight Control Pin Header (6*1 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
14	J-BKL1	1	GND	2	GND
		3	LVDS-BKL-CTL	4	LVDS-BKL-EN
		5	+ 12V	6	+ 12V

(15)LVDS VDD Select Jumper (3*2 Pin 2.54mm)

No.	Location	Settings	Function
15	JC-LVDS1	1-2(Default)	+ 3.3V
		3-4	+ 5V
		5-6	+ 12V

(16)CMOS Clear Jumper (3*1 Pin 2.54mm)

No.	Location	Settings	Function
16	CLR-CMOS1	1-2(Default)	Normal
		2-3	Clear CMOS

(17) SATA Power Pin Header (4*1 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
17	P-SATA1	1	+ 12V	2	GND
		3	GND	4	+ 5V

(18) Front Panel Pin Header (5*2 Pin 2.54 mm)

No.	Location	Pin	Definition	Pin	Definition
18	F-PANEL1	1	HD LED+	2	Power LED+
		3	HD LED-	4	Power LED-
		5	RESET-	6	PWR+
		7	RESET+	8	PWR-
		9	N/C		

(19) Keyboard&Mouse Pin Header (6*1 Pin 2.0mm)

No.	Location	Pin	Definition	Pin	Definition
19	J-KBMS1	1	KB-CLK	2	KB-DAT
		3	MS-CLK	4	GND
		5	+ 5V	6	MS-DAT

(20) VRM Power PROGRAM I/F Header (3*1 Pin 2.54mm)

No.	Location	Pin	Definition	Pin	Definition
20	J-VRPG1	1	VRM-SCL	2	GND
		3	VRM-SDA		

(21) System Fan Header (1*3 Pin 2.54mm)

No.	Location	Pin	Definition	Pin	Definition
21	SYS-FAN1	1	GND	2	+ 12V
		3	FAN Speed Detection		

(22) Front USB2 Pin Header (4*1 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
22	F-USB2	1	+ 5 V	2	USB-[1]
		3	USB+[1]	4	GND

Note:

[1] The signal of F-USB2 will be invaluable if M.2 support WIFI/BT.

(23) Front USB1 Pin Header (5*2 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
23	F-USB1	1	+ 5 V	2	+ 5 V
		3	USB-	4	USB-
		5	USB+	6	USB+
		7	GND	8	GND
				10	GND

(24) Front USB3 Pin Header (5*2 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
24	F-USB3	1	+ 5 V	2	+ 5 V
		3	USB-[1]	4	USB-[2]
		5	USB+[1]	6	USB+[2]
		7	GND	8	GND
				10	GND

Note:

[1] USB2.0 Connectors and F-USB3 share the same signal and can't be accessed simultaneously.

(25) DC12V/5V Power Output Header (4*1 Pin 2.54mm)

No.	Location	Pin	Definition	Pin	Definition
25	DC-OUT1	1	+ 12V	2	GND
		3	GND	4	+ 5V

(26) VGA Pin Header (12*1 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
26	J-VGA1	1	GND	2	VSYNC
		3	HSYNC	4	GND
		5	RED	6	GND
		7	GREEN	8	GND
		9	BLUE	10	GND
		11	DDC data	12	DDC clock

(27) Battery Header (2*1 Pin 1.25mm)

No.	Location	Pin	Definition	Pin	Definition
32	J-BAT1	1	+3.3V	2	GND

[END]